ARTIFICIAL SWEETENERS: 92% OF INDEPENDENT STUDIES REVEAL NEGATIVE SIDE-EFFECTS: DIABETES, MIGRAINE AND GUT MICROBIOME DISRUPTION, EVEN IN OFFSPRING

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CONTENTS

Intro

1. A long-standing controversy
2. Globalist multinationals at the source of controversy

Artificial sweetener issues

3. Migraine and gut microbiome disruption, even in offspring
4. Make you fat and diabetic
5. 100% of big business-funded studies positive, but 92% of outside research sees issues
6. Nutritive artificial sweeteners: same producers, same issues

Sources

7. User complaints about aspartame
8. Personal complaints about sucralose
9. User complaints about sucralose
10. User complaints about erythritol
11. User complaints even about stevia (and monk fruit)
12. "Sugar sugar" different from "fruit sugar"
13. Sponsored and unsponsored research summary on artificial sweeteners
14. Notes

INTRO

A long-standing controversy

Artificial sweeteners have been controversial for a long time. Complaints about aspartame started piling up in the 1980s. [1] Controversy surrounding saccharin doesn't just go back to the 1970s [2], but even to the 1900s: to obese right-wing elitist president Teddy Roosevelt dissing his first FDA administrator with the words:

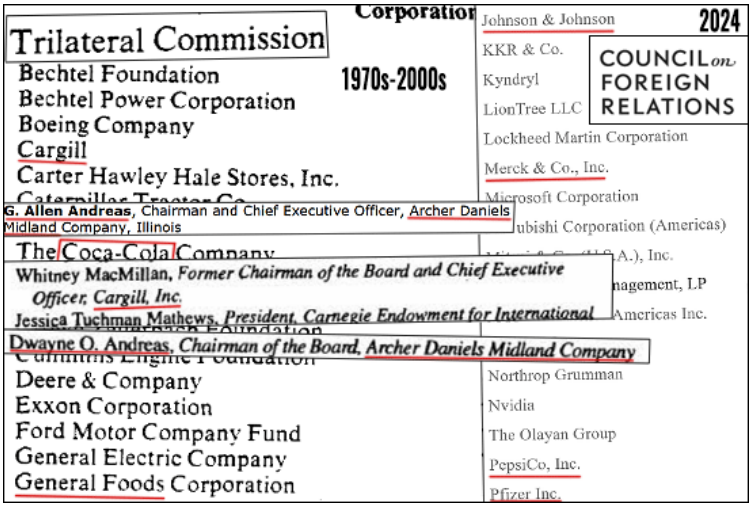
> *"Anybody who says that saccharin is injurious to health is an idiot."*

Afterwards, Roosevelt set up his Referee Board of Consulting Scientific Experts, chaired by saccharin's founder, which labeled the food additive as "safe". [3]

Back in the early 2000s, when trying to get a sense of what "conspiracies" were about, regularly I'd bump into sites fully dedicated towards warning about the dangers of aspartame. Despite the subject having my interest, in the subsequent two decades of working on ISGP I never never looked into the issue. I just avoided all artificial sweeteners as a precaution. Until I made a mistake and didn't do that for about 6 months - and paid the price. From there it took another few years, but here it is: an article about artificial sweeteners.

Globalist multinationals at the source of controversy

A second important thing to point out might be that artificial sweeteners, herbicides, seed oils, GMOs, pharmaceuticals, (micro)plastics and to some degree food all are produced by a small network of globalist multinationals that surround the CFR, Bilderberg, Trilateral Commission and Davos. So in that sense maybe someone shouldn't be surprised that there exists this long-standing controversy surrounding all these subjects. This extends to accusations of corruption surrounding the Food and Drug Administration, which is discussed in a separate article.



For a full list of these overlapping globalist multinationals it is recommended people visit ISGP's Trilateral Commission article. For

artificial sweeteners and seed oils, the multinationals in question are as follows:

Artificial sweeteners	Vegetable/seed oil
1. Archer Daniels Midland	1. Archer Daniels Midland
2. Cargill	2. BASF
3. Coca-Cola	3. Cargill
4. Johnson & Johnson	4. Monsanto
5. PepsiCo	5. Bayer
	6. DuPont

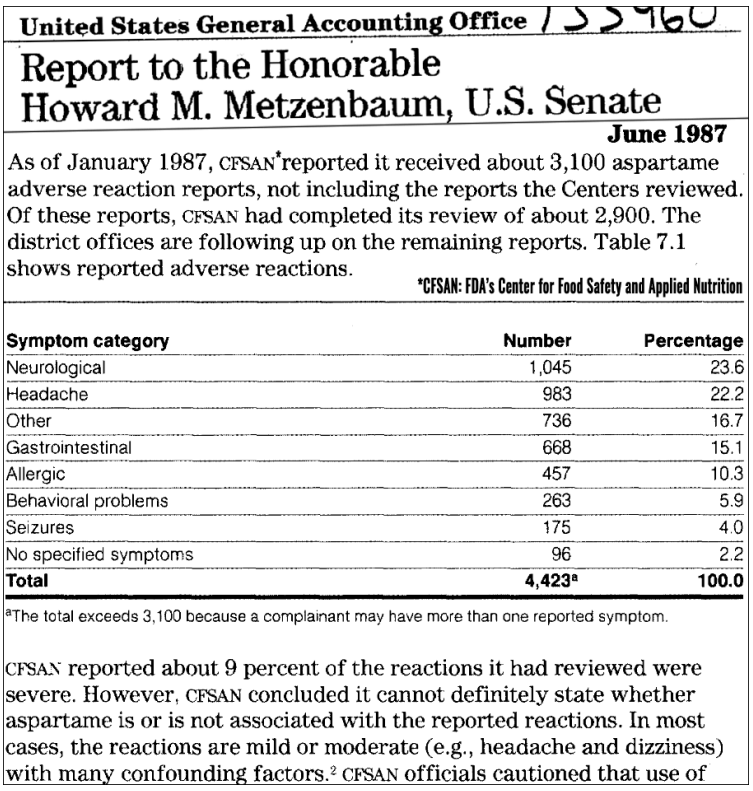
* Antibiotic producers make heavy use of aspartame, etc. to "sugar coat" their pills.

ARTIFICIAL SWEETENER ISSUES

Migraine and gut microbiome disruption, even in offspring

In 30 minutes of research I found - all on Reddit subforums and in YouTube comments - about 50 people complaining of migraines when ingesting artificial sweeteners. Some people only had issues with aspartame or sucralose. Others had similar issues with stevia and monk fruit extract. Another 15, similar to myself, were complaining about (eventual) intestinal upset, especially with sucralose. Apart from migraine, aspartame in particular has been associated with complaints of severe vision problems, including eyelid dermatitis [4], and an increase in epileptic attacks. [5]

In fact, looking at a 1987 mixed Senate/FDA report, these effects, at least for aspartame, are nothing new. The problem is that in the same report it is explained that in 1984 the Centers for Disease Control dismissed these complaints with the argument that there's *"no conclusive evidence that aspartame caused these adverse reactions."* [6] As the reader can see in the report, the FDA reached a similar conclusion (as would the U.S. Congress' Government Accountability Office) [7]:



United States General Accounting Office / 5 5 9 6 0

Report to the Honorable Howard M. Metzenbaum, U.S. Senate

June 1987

As of January 1987, CFSAN* reported it received about 3,100 aspartame adverse reaction reports, not including the reports the Centers reviewed. Of these reports, CFSAN had completed its review of about 2,900. The district offices are following up on the remaining reports. Table 7.1 shows reported adverse reactions.

*CFSAN: FDA's Center for Food Safety and Applied Nutrition

Symptom category	Number	Percentage
Neurological	1,045	23.6
Headache	983	22.2
Other	736	16.7
Gastrointestinal	668	15.1
Allergic	457	10.3
Behavioral problems	263	5.9
Seizures	175	4.0
No specified symptoms	96	2.2
Total	**4,423[a]**	**100.0**

[a]The total exceeds 3,100 because a complainant may have more than one reported symptom.

CFSAN reported about 9 percent of the reactions it had reviewed were severe. However, CFSAN concluded it cannot definitely state whether aspartame is or is not associated with the reported reactions. In most cases, the reactions are mild or moderate (e.g., headache and dizziness) with many confounding factors.[2] CFSAN officials cautioned that use of

The same report explains that complaints and questions of health have already plagued aspartame since 1974 [8], the year the FDA (for some time) allowed aspartame onto the market for a limited number of foods: tabletop sweetener, chewing gum, cold breakfast cereals, and dry foods. In 1975-1976 its creator, G.D. Searle, was exposed by the FDA in front of congress for having made *"deliberate decisions which seemingly were calculated to minimize the chances of discovering toxicity and / or to allay FDA concern,"* the complaints mainly being in relation to its medications Flagyl and Aldactone. [9] Among a dozen different type of deceptions listed by the sitting FDA commissioner [10] was the company's habit to *"cut tissues and other tissue masses from live animals without testing them or reporting them to the agency."* [11] Overlapping tactics included:

> *"Certain types of tumors noted on raw data entries of Flagyl tumor studies were unaccountably changed. Also, Searle had submitted to FDA an incomplete report on the number of tumors seen in animals who had been given Aldactone."* [12]

Questions were also raised about a dozen turned-in studies by G.D. Searle on aspartame. Brain cancer worries had been there from the start with aspartame. Worries only increased when *"in FDA's files in 1978, [neurobiologist] Dr.[John] Olney found 12 brain tumors in 320 [aspartame-]dosed rats as contrasted to none in 120 control rats."* [13] Dr. Olney, earlier a partially successful activist against MSG [14], publicly continued this debate [15], but long story short, it doesn't appear that aspartame increases the incidence of brain tumors, at least not after

daily ingestion for 1 or 2 decades. In fact, a National Cancer Institute-funded study from 1995 to 2000 on humans, demonstrated that the aspartame consumers group even had 27% less brain cancer than the non-consumers, with aspartame users having a theoretical 2% less chance of blood cancers. [16] That's not the entire story, at least not for the latter category. But we'll get back to that.

The main point is that 41% of scientists contacted for a 1987 senate report thought more research to prove aspartame safety was needed, mainly due to reports of neurological issues, migraine, intestinal upset, and mood swings. [17] The FDA dismissed all health concerns though, and allowed aspartame onto the market in the 1981-1983 period. In 1992 it stopped logging all complaints regarding aspartame.

Another point is that top neocon superclass member Donald Rumsfeld, fresh from his position as chief of staff of President Gerald Ford (whose vice president was Nelson Rockefeller, and secretary of state Henry Kissinger), was CEO and president of G.D. Searle from 1977 until 1985 [18], when the company was sold to Monsanto. He reorganized the company, but only turned G.D. Searle into a profit powerhouse from 1982 on by using his close Reagan White House connections, not the least CIA deputy director, national security advisor, and secretary of defense Frank Carlucci, his old Princeton roommate, to get new FDA commissioner Arthur Hayes, Jr. [19] to force through the legalization of aspartame. In just as shameless a move, in November 1983 Hayes switched his position as FDA commissioner to become senior medical adviser for Burson-Marsteller, Searle's public relations agency. [20]

"Conspiracies don't exist", and yet, looking a bit deeper, somehow it wasn't entirely unexpected that past scientific research indeed has been "flawed", with an ever increasing amount of research backing up the complaints of aspartame users, including the gut microbiome issues. [21] Research even shows that artificial sweeteners as acesulfame and sucralose disrupt the microbiome in unborn children. [22] It also shows that if unborn children are exposed to aspartame through their mothers, that the chances for blood- and lymphatic cancer greatly increases during the latter half of the (full) lifetime of rats by up to 130% (2.3x) - and that with just 400ppm aspartame daily, slightly less than 2 cans of diet coke. [23] All of this is tied in with other studies showing that pregnant mothers who drink artificial sweeteners get babies with higher BMIs, while ingesting traditional sugar does not show a similar effect. [24]

All kinds of other interesting, yet generally limited-in-scope, studies have been done. One 2008 study, for example, found a solid link between the build up in the brain of aspartame metabolite formaldehyde - a neurotoxic - and symptoms of migraine. The symptoms were reversible simply by ceasing the ingestion of aspartame. [25]

Make you fat and diabetic

In 2023, even the World Health Organization (WHO) stopped recommending people ingest artificial sweeteners, in light of increasing research that they put people at *"increased risk of type 2 diabetes, cardiovascular diseases, and mortality in adults."* [26] The WHO also acknowledged research that shows artificial sugars don't lead to reduced weight. [27]

On a society-wide scale such a conclusion certainly makes sense. Statistics show quite clearly that people have only become fatter in the age of diet products. [28] Diabetes has increased dramatically too. In 1980 an estimated 4.7% of the world population had diabetes. [29] In 2011 to 2014 this had risen to 8.5% [30], in 2021 to 10.5% [31], and it is projected to rise to 11 to 12% of the global population by 2045. [32]

With regard to making people more obese, it is strongly suspected this has to do with the fact that artificial sweeteners do not suppress the food reward pathways after ingestion, in contrast to sugar and other natural foods. [33] In fact, humans and animals have two food reward pathways: taste and a calorie-calculating one that can operate independently from each other. Artificial sweeteners throw off this system. It tricks the body into getting a caloric sweetness reward that never comes. This leads to a continuous craving of additional food, often sweet food, which gets compensated with additional meals. This is not just theoretical. In at least one study, subjects drinking a glass of water with aspartame dissolved in it experienced greater hunger afterwards than those drinking water with regular sugar in it, or pure water. [34]

Then there is the diabetes issue. One study providing an explanation here - besides mere overconsuming sugars - was conducted in 2014 by Israeli scientists. They fed groups of mice either the artificial sweeteners aspartame, sucralose, or saccharin - or two two natural sugars: glucose or sucrose. After 11 weeks the mice on natural sugars were doing just fine, but the ones on the artificial sweeteners were obese, all had developed *"abnormally high blood sugar [i.e.] glucose intolerance"*, and were now at risk of *"diabetes and a heightened risk of liver and heart disease."* The reason for this was that the artificial sugars had promoted the growth of gut bacteria that *"were the very same ones shown—by other researchers—to be particularly abundant in the guts of genetically obese mice."* An antibiotic treatment eventually brought the gut microbes in the obese mice back to what it had been before, resulting in them processing sugar in a normal manner again and a return to normal blood sugar values. [35]

In other words, artificial sugars aren't "inert" at all when going through the human intestinal tract, as so often propaganda has been, and has

even been assumed by many researchers. [36] Predominantly the wrong bacteria are doing their best to digest them.

If artificial sweeteners work for you, great. I certainly have seen a few comments of people having lost 50lb or more simply by switching their regular coke with diet coke. You could also argue what is worse: eating and drinking 1.5 gram of aspartame a day? Or 1,500 grams (3.5 pounds) of table sugar by ingesting 2 large coke bottles plus a packet of cookies, a microwave meal and some ice-cream? Certainly on a hot summer day such amounts are perfectly attainable by many youths. In terms of cancer, it probably is a coin toss, also with what type of cancer.

Similar you can wonder what is going to wreck your gut more: 1 gram of sucralose or 1,000 grams of sugar a day? Well, for me personally, that question seems answered: small amounts of sucralose became inedible within 6 months due to burning intestine syndrome, something that never happened with decades of quite a lot of sugar-consumption. And a bunch of studies above also seem to confirm that regular sugar is safer.

Arguably it would be best that all artificial sweeteners are banned and replaced with natural alternatives only, in particular stevia, assuming it doesn't cause the same issues as we see above.

100% of big business-funded studies positive, but 92% of outside research sees issues

Looking deeper into artificial sweeteners still, and going back to some of the positive studies... it quickly turned out that the first scientific article I initially read on Google Scholar proclaiming the safety of artificial sweetener sucralose [37], was semi-covertly financed by **Coca-Cola**, **PepsiCo**, **Cargill**, **Archer Daniels Midland**, and the inventors and manufacturers of sucralose and various other leading artificial sweeteners. [38]

Coincidence or not, the "Calorie Control Council" - the funding vehicle used - not only already was controversial in the 1970s for its saccharin-lobbying efforts [39], the companies involved - largely the same in the 1970s as today - we all just listed as major financiers of the CFR and Trilateral Commission.

Also relevant might be that the pharmaceutical firm **Johnson & Johnson**, once again a major funder of the CFR and Trilateral Commission, played a key role in monetizing sucralose from the late 1970s [40], and owned it until late 2015. [41] They sold it just in time for yet another detrimental study to come out against sucralose, in that case linking the artificial sugar to cancer development. This new study resulted in Washington, D.C. think tank the Center for Science in the Public Interest (CSPI) to relabel its sucralose dietary advice from "caution" to "avoid". [42]

Various other industry-funded studies with regard to artificial sweeteners can be found with some effort too, but the thing is, big food and pharmaceutical industry's corrupting influence over "scientific" studies is an issue that actually has already been addressed with some regularity in various scientific publications, certainly with regard to artificial sweeteners. A 2019 article in the Food and Chemical Toxicology journal accused researchers funded by the same Calorie Control Council of ignoring and distorting all past proof that sucralose "*unequivocally and irrefutably disrupts the gut microbiome at doses relevant to human use.*" [43] Three years earlier, in 2016, it was almost coyly concluded in the peer-reviewed PLoS One journal that:

> *"There is some evidence of funding bias in original research studies. Walton has reported that among a sample of studies of aspartame, 100% of the industry sponsored studies concluded that aspartame was safe, and 92% of the independently funded studies identified adverse effects of aspartame consumption [43]. Millstone observed that in a recent re-evaluation of aspartame safety by the European Food Safety Authority, 97% of the studies that reported no harm were industry sponsored, while 100% of the studies indicating possible harms were non-industry sponsored [44]."* [44]

In 2010 the peer-reviewed Journal of Food Law & Policy allowed the publication of the study 'Killing Us Sweetly', in which the artificial sugar industry and FDA were accused of blatant and extreme corruption when it comes to unsafe products being allowed onto the market. [45]

This corruption is expanded on here too in a separate chapter named 'FDA corrupted by big pharma and food'. Basically, in case of artificial sweeteners, large multinationals ghostwrite their own biased research, pay "respectable" scientists to attach their names to various such studies [46], and hand them over to the FDA - which rubber stamps the research, maybe puts up some token criticism, and makes the sweetener (or drug) available to the public. As long as no overly disastrous health consequences are unearthed, and the multinationals keeping casting doubt about actually independent studies by continuing to fund their own sponsored research, all should be well.

Obviously only a small portion of the biggest CFR and Trilateral-tied multinational get away with these practices. But these happen to be the exact multinationals that keep popping in relation to all the most problematic food additives in western society.

Nutritive artificial sweeteners: same producers, same issues

The biggest producers of maltodextrin - with its stratospheric glycemic index of 95 to 135 compared to table sugar of 65 - once again are **Cargill**,

Archer Daniels Midland and long-time **Johnson & Johnson partner Tate & Lyle.** [47]

Cargill and Archer Daniels Midland, with their long Trilateral Commission past, also are the biggest producers of another controversial nutritive artificial sweetener, high fructose corn syrup, trailed at considerable distance by Tate & Lyle. [48]

In 2004 all three companies settled for more than $400 million in a price fixing scandal, before the case went to trial. [49] In 2012 all three companies again landed in hot water for falsely advertising that high fructose corn syrup is *"a natural corn sugar"* and that *"your body can't tell the difference"* between high fructose corn syrup and traditional table sugar. [50]

There exist a lot of health worries about both, from fatty liver to diabetes and heart disease, but they are in countless products as cheap sugar replacements, especially in the United States.

High fructose corn syrup definitely is not healthy in the book of this author. It eventually caused similar "burning intestine" syndrome as sucralose after eating a little to much icecream over several months, which did not contain any artificial sugars besides high fructose corn syrup. But I haven't gotten around to researching it.

SOURCES

User complaints about aspartame

Aspartame (and overlapping acesulfame, sucralose, etc.) criticism that it causes migraines:

- **Reddit comment:** *"I found out aspartame was a trigger when I got pregnant... I'd been drinking diet coke regularly and stopped drinking soda while I was pregnant... headaches went away! Started drinking diet coke again after giving birth and immediately started getting headaches, so I stopped. Sucralose is, unfortunately, also a trigger for me... but that one seems less common."*
- **Reddit comment:** *"I cut out aspartame (and swapped to non-estrogen bc) and my migraines went from 4-5 migraine days a week to only a few a month. If only they somehow made the flavor of aspartame free sugar free gum last more than 2 minutes."*
- **Reddit comment:** *"Scientifically I can't speak to this, bc I'm a biologist, but I can say I know a few people that are allergic to aspartame and for me if gives me the runs lol."*

- **Reddit comment:** *"I can attest to this. I went through a period of drinking a lot of Crystal Light lemonade. My migraines got worse. When I stopped drinking it, they got better."*
- **Reddit comment:** *"My migraines started from nerve damage in my face and CRPS inside my nasal sinuses and aspartame makes the soft tissue in my mouth and throat and soft palette a bit puffy and itchy similar to an allergy so I avoid it when I can, but I also get a bit flushed and increased heart rate."*
- **Reddit comment:** *"Years ago, I used to drink a diet pepsi at night as a treat and I would get small headaches. I didn't think much of it because I've always issues with my head. Once I stopped drinking them those headaches stopped."*
- **Reddit comment:** *"Aftertase AND violent shits for me. Actually most artificial sweeteners make me pretty ill except sucralose."*
- **Reddit comment:** *"I mean personally I can't drink anything that contains aspartame or asculfame as it results in an istant migraine. I think sucralose mashes me up as well."*
- **Reddit comment:** *"I personally feel worse having soda with aspartame than one with sugar."*
- **Reddit comment:** *"I get an instant headache (different from my usual migraines) if I have even a sip of something with aspartame in it, so I already avoid it! Not surprised it's a trigger [for you too]."*
- **Reddit comment:** *"One sip [of an aspartame drink] is a direct trip to Headache City. Not a regular migraine, but still very painful and unpleasant."*
- **Reddit comment:** *"Absolutely one of my biggest triggers is artificial sweeteners & not just aspartame - I avoid them all."*
- **Reddit comment:** *"Hasn't this been known for years and years? I remember my dad (he was also a migraine sufferer) telling me to stay away from aspartame and [flavor enhancer] MSG [Monosodium glutamate] cause they're migraine triggers, some 10 years ago."*
- **Reddit comment:** *"Yes!!! I can smell that shit too!!! Always got sick on any artificial sweetener!!"*
- **Reddit comment:** *"I became aware of aspartame when I was a support worker. Another support worker had told me to always buy coffee sweetener with no aspartame in as it can cause headaches. Non of the other staff took her seriously except me, so I always ensured he got no aspartame sweetener. She then left and my shift was changed so I didn't take him shopping anymore. I ensured everyone knew what to buy. About 4 months later he's suffering from headaches every day and every one just thinks he putting it on but I knew something wasn't right. I tracked it back to when I stopped taking him shopping. I went and checked his sweetener and it had aspartame in. I told the manager and she said it's fine, I asked*

her to please just give no aspartame sweetener a try and she reluctantly agreed. Within a few days his headaches stopped. Just goes to show what an impact it can have. Might be worth a try for someone out there. Especially if you have epilepsy or a brain injury.
...
Just to add he also had 3 epileptic seizures and a couple of weird episodes in that time which was unheard of for him. He usually had one every 4 months on average. As soon as he stopped having those sweeteners his seizures went back to normal. Also interesting to know."

- Reddit comment: *"I'm the same... Just sweeteners generally give me a sore head (not sure which ones) but I'm also not so keen on the taste either."*
- Reddit comment: *"Same here... After a month or so [into my diet] I started drinking Pepsi Zero..., but unfortunately it has Aspartame & I've noticed about an hour after drinking it I'll usually get a throbbing migraine + feel jittery due to the caffeine (I did this 5 days in a row to confirm). After doing more research you genuinely start to wonder how is this stuff even legal? Sucralose, High Fructose Syrup, Aspartame & Caramel Color are all so bad for us yet found in many different foods we consume daily. I looked into the UK regulations & turns out so much of the ingredients commonly found in artificial foods here are flat out banned over there due to health consequences/concerns. Insane."*
- Reddit comment: *"Aspartame is a big trigger for me, but Splenda and stevia are okay."*

Personal complaints about sucralose

Personal experience of sucralose being detrimental to intestinal health:

- I always avoided artificial sweeteners except stevia, but at one point I got lazy, because I found my daily dose of natural "kwark" / "quark" (thick yoghurt, but not similar to the U.S. cottage cheese) absolutely terrible to eat, and mixing it with a fresh orange also was too much work. In hindsight, I could have just tossed half a teaspoon of honey in, or blend it with my daily bag of mixed nuts/raisins, but at the time, out of sheer desperation, I decided to try 500 gram "kwark" cups with the artificial sweetener sucralose in it. For a while, it was heaven. Very tasty and not too expensive.
  However, after eating 1-2 pounds (500-1000 grams) a day for about 6 months, all of a sudden I developed a painful intestinal burn in my upper stomach area, this for the first time in my life. Every time I left the sucralose-laced "quark" alone, I had no issue.
  Now, I still don't know why I didn't do any research beforehand, but

looking into sucralose a bit I was shocked to find out that it actually could be used as an insectide to blow up the intestines of bugs. Five years later, I also ran into a typical article that explained how "new research shows" that sucralose tends top cause leaky guy, leading to symptoms as *"a burning sensation, painful digestion..."*[51]

User complaints about sucralose

Apart from scientific research demonstrating it, a huge amount of complaints can be found that sucralose indeed causes intestinal upset in many people after some time. More universally with artificial sweeteners, many people also report headaches. Let's start with the stomach upset comments:

- **Reddit comment:** *"Stomach pain & bloating from sucralose? Has anyone else experienced stomach pain, discomfort & indigestion after eating sucralose containing products for a while? I've been experiencing these symptoms recently and I'm pretty sure its due to increasing my intake of sucralose in quark yogurts, it's not something thats immediate after eating but I think it could be due to a build up of sucralose leading to it disrupting the gut microbiome so I'm wondering if anyone else has had the same experience?"*
- **Reddit comment:** *"I developed serious gut issues due to prolonged ingestion of sucralose . they dissipated within a week of quitting. for me, gut health is a serious priority, so I am not a fan... especially when Stevia exists."*
- **Reddit comment:** *"Yes for me, modified sweeteners wreck me, including sucralose."*
- **Reddit comment:** *"Yuup, sucralose messes me up. Bloating, and if I have too much over several days I get 'sour stomach' which feels as bad as it sounds."*
- **Reddit comment:** *"For me, bloating and slow digesting from sucralose. Very noticeable when eating skyr sweetened with sucralose. It's amazing that the effect is THAT noticeable. Tried it several times with weeks in between. But the results are always the same."*
- **Reddit comment:** *"Sucrolose (aka Splenda) gives me THE WORST headache and stomach ache. 100% of the time. I avoid Splenda as much as possible."*
- **Reddit comment:** *"Sucralose is the worst. I check everything I buy that says sugar free and if it contains sucralose it doesn't make it into my home. Causes gastric distress. It took a while to figure out what was causing it."*
- **Reddit comment:** *"I think that many people have negative effects to artificial sweeteners even in smaller servings, I have always gotten a*

little bit of an upset stomach from them."

- **Reddit comment:** *"My gastro Dr said to avoid it as it "wrecks your gut.""*
- **Reddit comment:** *"I'm pretty sure it causes me to bloat. I quit my energy drink addiction recently and I lost about 10 pounds of water weight within a few days."*
- **Reddit comment:** *"Based on anecdote I'd buy the theory that they may cause bloating and water retention. Whenever I drop my energy drink habit my face seems to lean out and I drop 5-10 pounds of water weight."*
- **Reddit comment:** *"It gives me and members of my family explosive diarrhea, along with accompanying terrible intestinal pains. Not large amounts, just a "serving" in my case a teaspoon of coffee creamer. Thats it for the anecdote part."*
- **Reddit comment:** *"All I know is anytime I have anything with Sucralose I am having severe stomach cramps with no resolution for sometimes 4+ hours. All it takes is one sip of an energy drink which has Sucralose, and 3 hours later I'm in pain."*
- **Reddit comment:** *"Sample size of 1 but [sucralose] gives me horrible diarrhea. It definitely does something, idk what. " Reply: "Omg same!!!! Everyone thinks I'm insane. I can't have any artificial sweetener... sucralose, stevia, etc. it all gives me diarrhea."*
- **Reddit comment:** *"Nothing inherently wrong [with sucralose gum], but if you have a lot it may upset your stomach. Even small doses don't agree with me."*
- **Reddit comment:** *"Six packets of Splenda a day would alter my gut in several unpleasant ways. Half a packet in my cup of coffee seems to be fine."*
- **Reddit comment:** *"I used to be addicted to splenda and literally everything had to be sweetened. Now I've got my taste buds back and didn't realize how my body was compensating. That's just me though."*

User complaints about erythritol

Erythritol criticism:

- **Reddit comment:** *"Erythritol absolutely jacks me up which is a shame because it tastes So good."*
- **Reddit comment:** *"I just recently saw an article about study that looked at a possible link between Erythritol and heart disease. I cut everything out of my diet that used Stevia/Splenda/anything with Erythritol."*

User complaints even about stevia (and monk fruit)

Many people even complain that Stevia is giving them migraines (questions have been asked about Stevia's safety as well):

- **Reddit comment:** *"Stevia actually gave me horrible gut issues within a week of consuming it daily. It was the first substance that I consumed that ever gave me almost instant side effects."*
- **Reddit comment:** *"OMG, I thought it was just me! I can't have any fake sugars, and I swear I can smell them! Even stevia can trigger a migraine."*
- **Reddit comment:** *"Yeah, Stevia or Monk Fruit extract are both non-starters for me."*
- **Reddit comment:** *"Same!! Even stevia, if I have more than the tiniest bit, will screw me up."*
- **Reddit comment:** *"One of my biggest triggers is artificial sweetener. I have to read every label these days because they are so common but stevia, monk fruit, etc they are all so triggering to me that I can basically smell something and tell you if it's going to make me sick. They're getting harder and harder to avoid these days. Long live regular Coke!"*
- **Reddit comment:** *"I cannot have any sweeteners other than sugar (white/brown/powdered/etc) and honey. This includes "natural" sourced sweeteners like stevia leaf extract. If I do, I get a massive migraine until the substance processes out of my body. Same effect as having nitrates (meat preservative, found in dark leafy greens)."*
- **Reddit comment:** *"I've used Stevia for years (at least 10), and while my migraines had started well before that, I now wonder if over time the use of Stevia became one of my migraine triggers - because I haven't gotten any since I've stopped using it. Of course it could just be a coincidence, but I'll be more than happen if I unknowingly eliminated a major trigger."*

"Sugar sugar" different from "fruit sugar"

This author has seen several comments in which people mentioned that fruits would not give them any problems with their health, from joint pain to general neuropathy. I should have backed up these comments earlier, but let's add them here for now:

- **YouTube comment:** *"I reduced my white sugar intake (candy, cookies, doughnuts, cake, ice cream, soda, etc.) and my symptoms [of neuropathy] decreased by 95%. I now understand I can never go back to eating foods that contain high refined sugar. The natural sugars in fruits have not caused any adverse problems for me. I eat lots of fruit with no problems."*

Sponsored and unsponsored research summary on artificial sweeteners

- First off, stevia needs to be discussed separately. Maybe Monk Fruit as well. While Stevia is a natural sugar substitute with the vast majority of studies showing it is safe, some people have still reported getting headaches from it, similar to artificial sweeteners. The same also goes for China's Monk Fruit, whose processing into a sweetener was patented by Trilateral firm Procter & Gamble in 1995.
- The main artificial sweeteners - or better said, non-nutritive sweeteners (NNS) - include aspartame, acesulfame, sucralose, saccharin, erythritol, and neotame.
- Aspartame was discovered by a G.D. Serle scientist in 1965. In 1974 aspartame was approved for dry foods. In 1975-1976, Searle was caught by the FDA and congress heavily falsifying its data on two drugs: Flagyl, Aldactone, with apparently somewhat less 11 falsified studies on aspartame. From 1977 until its 1985 merger with Monsanto, G.D. Searle's CEO and president was Donald Rumsfeld. In 1983 the FDA approved the use of aspartame on the food market.
  - April 8, 1976, U.S. Congress: House, 'Preclinical and Clinical Testing by the Pharmaceutical Industry, 1976: Joint ', Statement by Alexander M. Schmidt, M.D., FDA commissioner 1973-1976: *"In testimony before these Subcommittees on July 10 , 1975 and January 20, 1976, I described disturbing evidence of quality control problems in the performance of animal studies of drugs and food additives intended for human use by and for the G. D. Searle Co. Today I would like to report to you the final results of the Food and Drug Administration's detailed investigation of animal studies performed by Searle and by Hazleton Laboratories under contract of Searle and the actions that are being taken as result of that investigation ...*
    It is certainly the first time that such an extensive and detailed examination of this kind has taken place. We have never before conducted such an examination as we did at Searle. From time to time, we have been aware of isolated problems, but we were not aware of the extent of the problem in one pharmaceutical house. ...
    We have noted that Searle has not submitted all the facts of experiments to FDA, retaining unto itself the unpermitted option of filtering, interpreting, and not submitting information that [FDA] would consider material evaluation of the product. Some of our findings suggest an attitude of disregard for FDA's mission of protection of the public health by selectively reporting the results of studies in a manner which allays the

concerns of questions of an FDA reviewer. ...
Searle made a number of deliberate decisions which seemingly were calculated to minimize the chances of discovering toxicity and / or to allay FDA concern, including:
- Designing protocols which call for fewer animals to be examined histopathologically in certain groups than were available;
- using fixation in-toto with necropsy at a later date, possibly resulting in greater loss of tissues to autolysis;
- excising tissue masses from live animals, in some cases without histologic examination of the masses, in other without reporting them to FDA;
- selecting statistical procedures which used a total number of animals as the denominator when only portion of the animals were examined, thus reducing the significance of adverse effectsl ...
- presenting information to FDA in a manner likely to obscure problems ...
- delaying the reporting of alarming findings;
- reporting one pathology report while failing to submit, or make reference to another, usually more adverse, pathology report on the same slide.
- reporting animals as unavilable for necropsy when, in fact, reports indicate that the animals were available but Searle chose not to purchase them. ...
- too few data were collected or lost;
- tissue masses reported in antemortem observations, as as the day of necropsy, which were not reported at necropsy; ...
- clerical or arithmetic errors which resulted in reports of fewer tumors."

- April 9, 1976, The Argus (Fremont, California): *"The Food and Drug Administration disclosed yesterday it has recommended a federal grand jury investigation of the G.D. Searle pharmaceutical firm for allegedly falsifying test results on drugs.*
FDA Commissioner Alexander M. Schmidt told a joint hearing by two Senate subcommittees the Justice Department has been handed the Findings of a special agency task force which accused Searle of "an attitude of disregard for FDA's mission of protection of the public health." He said FDA has asked "that grand jury proceedings be instituted..."
Schmidt said the agency also has started a company-by-company investigation of drug testing on animals to determine if there have been additional violations of federal regulations. The task force report said that, among other things, Searle

sought to minimize chances of discovery by the FDA that drugs it was testing could be poisonous. It said the firm cut tissues and other tissue masses from live animals without testing them or reporting them to the agency.

Sen. Edward M. Kennedy, presiding at the hearing, commented: "Those findings must be alarming to every American who takes prescription drugs."

- June 1987, U.S. GAO, 'FDA: Food Additive Approval Process Followed for Aspartame: Report to the Honorable Howard M. Metzenbaum, U.S. Senate': *"At your request, we have reviewed the Food and Drug Administration's (FDA'S) process for approving aspartame- a sweetener marketed under the brand name NutraSweet. This report discusses FDA'S (1) process for approving aspartame, (2) review of the scientific issues raised concerning the aspartame studies, and (3) monitoring of current safety concerns on aspartame. ...*

  Purpose: Since 1974, aspartame, a food additive marketed under the brand name NutraSweetB, has been the subject of controversy. Concerns have been raised about the quality of the research supporting its safety...

  Searle submitted nearly 170 studies or analyses to support aspartame's safety. FDA considered seven of these studies crucial t.o aspartame's GAO believes that these crucial studies met FDA'S requirements for the types of studies needed for a food additive approval. FDA reviewed all of the studies submitted and concluded that they demonstrated aspartame's safety. ...

  Results in Brief: FDA adequately followed its food additive approval process... Twelve of the 69 scientists responding to GAO'S questionnaire expressed major concerns about aspartame's safety. However, FDA and others have sponsored over 70 completed, ongoing, and planned studies on aspartame, including its effects on neurological behavior, children, and pregnant women. GAO believes that FDA's and other scientists' planned and ongoing research, and FDA'S monitoring of adverse reactions, should provide FDA with a basis for determining what future actions, if any, are needed on aspartame. ...

  Quality of Searle's Studies: In 1975, an FDA task force investigating Searle laboratory practices questioned the quality of the data in certain aspartame studies. The taskforce concluded that in some Searle studies, it was difficult to draw conclusions on safety. As a result of the task force's findings, detailed investigations of 15 aspartame studies, including the 7 crucial studies, were begun in 1977 by FDA and a group of university pathologists. After reviewing 12 Searle aspartame

studies, the university pathologists noted that although they found a number of minor discrepancies in the studies, there were few, if any, discrepancies that would significantly affect the studies' results. For the remaining three studies, FDA stated that data problems noted would not alter the conclusions. FDA concluded that the studies were of sufficient quality to be used to assess aspartame's safety.

Current Concerns on Aspartame: FDA has analyzed about 3,000 reported adverse reactions. However, FDA concluded that it cannot definitely state whether aspartame is or is not associated with the reported reactions. Most of the reactions reported are mild or moderate, such as headache and dizziness. ... In GAO'S questionnaire, 28 out of 69 scientists indicated areas where they believed more research is needed on aspartame to resolve their con- cerns. The areas most frequently mentioned were neurological functions, brain tumors, seizures, headaches, and adverse effects on children and pregnant women. ...

FDA Established a Task Force to Review Searle's Studies: ... certain types of tumors noted on raw data entries of Flagyl tumor studies were unaccountably changed. Also, Searle had submitted to F'DA an incomplete report on the number of tumors seen in animals who had been given Aldactone. ...

PBOI Selected to Address Issues on Aspartame's Safety: ... While examining aspartame animal studies in FDA'S files in 1978, Dr. Olney found 12 brain tumors in 320 dosed rats as contrasted to none in 120 control rats. Dr. Olney explained this many brain tumors in rats was rare, citing several references in support of his claim. After CFSAN and the objectors agreed to the issues, each nominated five individuals to serve on the PBOI. Searle, as a participant, also nominated five individuals. ... The PBOI members agreed with CFWN and concluded that the ingestion of aspartame, either alone or together with glutamate, cannot. be expected to increase the incidence of brain damage. ...

The Centers for Disease Control Reviews Adverse Reaction Reports: The number of adverse reaction reports on aspartame increased from 108 in the first 6 months of 1983 to 248 in the last 6 months of 1983. CFSANsuspected this increase might be related to widespread media attention on possible "side effects" of aspartame after the carbonated beverage approval, CFSANconcluded that the adverse reactions, such as headaches, dizziness, and mood changes, were generally not severe and showed no clear-cut association with aspartame consumption."

- All original research demonstrating the safety of non-nutritive sweeteners (NNS) is based on sponsored studies of the multinationals controlling them, and their joint lobbying and corrupting powers over the FDA - and apparently the EU's counterpart as well. A lot of later "research" has been sponsored by this industry as well.
  - Sep. 8, 2016, PLoS One, 'Relationship between Research Outcomes and Risk of Bias, Study Sponsorship, and Author Financial Conflicts of Interest in Reviews of the Effects of Artificially Sweetened Beverages on Weight Outcomes: A Systematic Review of Reviews' *"There is some evidence of funding bias in original research studies. Walton has reported that among a sample of studies of aspartame, 100% of the industry sponsored studies concluded that aspartame was safe, and 92% of the independently funded studies identified adverse effects of aspartame consumption [43]. Millstone observed that in a recent re-evaluation of aspartame safety by the European Food Safety Authority, 97% of the studies that reported no harm were industry sponsored, while 100% of the studies indicating possible harms were non-industry sponsored [44]."*
  - 2010, issue 1, Journal of Food Law & Policy, Jason Iuliano (Cambridge University), 'Killing Us Sweetly: How To Take Industry Out Of The FDA' (**PDF**).
  - The first scientific review paper on sucralose that this author read on Google Scholar, turns out to have been funded by the corporations most benefiting from the widespread sale of artificial sweeteners. The paper was funded by something called the "Calorie Control Council". Upon checking what this is, it turned out that (paying) members included Coca-Cola, PepsiCo, and a host of artificial sweetener producers. Clearly there should be legislation here to force indirect donors into the 'Financial Support' section of papers, and maybe be listed at the top of papers:
    - Aug. 2017, Food and Chemical Toxicology, pp. 323-355, 'Critical review of the current literature on the safety of sucralose': *"Confirms conclusions of regulatory agencies globally that sucralose is safe...*
      Financial support was provided by the Calorie Control Council, Atlanta GA, to the employers of the authors for the preparation and publication of this review."
    - caloriecontrol.org/calorie-control-council/ (accessed: May 22, 2024): *"Members include: ... Archer Daniels Midland Company. ... Cargill ... Coca-Cola ... PepsiCo ... [sucralose discoverer and patent holder] Tate & Lyle ... [aspartame*

producer] SinoSweet ... [saccharin producer] JMC Corporation..."

- Also relevant is that the pharmaceutical firm Johnson & Johnson, a major funder of globalist think tanks as the CFR and Trilateral Commission, played a key role in monetizing sucralose from the late 1970s, and owned it until 2015.

- Earlier studies had also pointed out not just issues with artificial sweeteners as sucralose themselves, but also indicated that crooked studies were being sponsored by the artificial sweetener industry through the 1966-founded lobby Calorie Control Council:
  - Oct. 1979, Annals of the New York Academy of Sciences, 'The Conflict Between Individual Freedom And Social Control: Saccharin And Food Additives': *"If you were a soft - drink manufacturer and had the Freedom of Choice between two ingredients -- one which cost about six cents per gallon of syrup concentrate and the other about a dollar per gallon, * ... which would you choose? ... * In speaking with several people in the soft-drink industry who did not wish to be identified, 16 times more sweetening expense per gallon, case, bottle, was the lowest estimate of the relative cost of sugar to saccharin. Others said sugar was more than 25 times higher. ...*

    *Unless your primary concern was something other than profit, you would choose the low-priced ingredient, saccharin, rejecting the high-priced sugar. Health risks and benefits aside, for the moment, the American soft drink industry, led by its well-oiled Calorie Control Council, fought hard and successfully for this freedom of choice for industry and thus deprived the American public of its freedom of choice. **... ** In Canada, with No Calorie Control Council, according to information given to me by Dr. Alex Morrison, Chief of the Health Protection Branch in Canada, the entire Canadian government received only 500 letters protesting the saccharin ban. ...*

    In Canada, were the use of saccharin in soft drinks and other processed foods was banned, consumers for the first time are being given a choice between the usual sugar-laced soft drinks and safer, much lower calorie saoda, (some with less than five calories per ounce), none containing a known carcinogen. In the U.S., because the FDA was prevented from banning saccharin in soft-drinks, consumers do not really have a choice between two safe (at least as far as cancer risk) products."

- Oct. 2019, Food and Chemical Toxicology, 'Revisited: Assessing the in vivo data on low/no-calorie sweeteners and the gut microbiota': *"Over the last two decades, safety concerns about low/no-calorie sweeteners (LNCS) have been described in the archival scientific literature including elevated risk of metabolic syndrome, type 2 diabetes, excessive weight gain, cardiovascular disease, safety, and disruption of the gut microbiome. A recent review by Lobach, Roberts, and Roland in Food and Chemical Toxicology examined 17 research articles on modulation of gut bacteria by LNCS along with other selected publications. In the conclusions of their paper, they claim that LNCS 1) do not affect gut microbiota at use levels and 2) are safe at levels approved by regulatory agencies. Both of these claims are incorrect. ... Scientific studies on the sweetener sucralose, used here as a representative LNCS, indicate that this organochlorine compound unequivocally and irrefutably disrupts the gut microbiome at doses relevant to human use. Results of dozens of additional research publications added and reviewed here also raise significant and extensive concerns about the safety of sucralose for the human food supply. ...*

  Scientific research studies and systematic reviews have concluded that some LNCS cause significant alterations in the composition of the gut microbiome and that dysbiosis occurs at levels approved by regulatory agencies (Abou-Donia et al., 2008; Schiffman and Rother, 2013; Suez et al., 2014; Bian et al., 2017; Uebanso et al., 2017; Frankenfeld et al., 2015; Ruiz-Ojeda et al., 2019). ...

  The publication by Lobach, Roberts, and Rowland was financially supported, and reviewed prior to journal submission, by the Calorie Control Council, a special-interest trade group funded by sweetener companies. "
- 2010, issue 1, Journal of Food Law & Policy, Jason Iuliano (Cambridge University), 'Killing Us Sweetly: How To Take Industry Out Of The FDA' (**PDF**): *"FDA leaders' close ties to the very [artificial sweetener] industry they were supposed to be regulating present a startling picture. Ignoring warnings from both independent scientists and their own review panels, FDA decision makers let greed guide their actions. They approved carcinogenic sweeteners such as saccharin, aspartame, and sucralose while simultaneously banning the natural herb stevia because it would cut into industry profits."*

- Despite this obviously being not true, the safety of artificial sweeteners also is aggressively defended on Reddit chemist, science, and nutrition subforums, or by other "skeptics". Interesting here too is how all critical comments are to be found at the bottom, the least upvoted, even those based on personal experience. Crooked supermoderators, managing many different subreddits, often are responsible for the dogmatic views on various Reddit subforums.
- Fact is, all artificial sweeteners, similar to sugar, change the gut microbiome in a variety of ways. [52]
- Artificial sweeteners as acesulfame and sucralose even negatively affect the gut microbiomes of offspring:
  - June 20, 2019, Frontiers in Microbiology, 'Maternal Exposure to Non-nutritive Sweeteners Impacts Progeny's Metabolism and Microbiome': *"Human exposure to NNS begins early through breastmilk, infant rehydration solutions and medications (Freedman et al., 2010; Sylvetsky et al., 2015). To date, a higher infant BMI at 1 year of age has been associated with maternal NNS consumption during pregnancy in a recent epidemiology study (Azad et al., 2016). Studies in animals suggest that acesulfame-K crosses the placenta, and in utero exposure results in increased sweet preference in adulthood (Zhang et al., 2011; Chen et al., 2013). In other animal studies, sucralose exposure during pregnancy showed no deleterious effects on fetal organogenesis (Kille et al., 2000) but increased the risk of hematopoietic neoplasia in male offspring (Soffritti et al., 2016).*
    In light of the reported NNS effects on the gut microbiome (Abou-Donia et al., 2008; Cowan et al., 2013; Palmnäs et al., 2014; Suez et al., 2014; Bian et al., 2017b) and metabolism (Brown and Rother, 2012; Cowan et al., 2013; Simon et al., 2013; Swithers, 2013; Palmnäs et al., 2014; Suez et al., 2014; Bian et al., 2017b), it is important to investigate the relationship between NNS consumption in pregnancy and lactation and the offspring's microbiome and metabolism. Indeed, transmission of the microbiome from mother to child is a key factor, which influences metabolic regulation from early on, and is related to an increased risk of obesity, asthma and celiac disease (Faith et al., 2013; Bäckhed et al., 2015). ...
    WWe exposed pregnant and lactating mice to NNS (sucralose, acesulfame-K) at doses relevant for human consumption. While the pups' exposure was low, metabolic changes were drastic, indicating extensive downregulation of hepatic detoxification mechanisms and changes in bacterial metabolites. Microbiome profiling confirmed a significant increase in firmicutes and a striking decrease of Akkermansia

muciniphila. Similar microbiome alterations in humans have been linked to metabolic disease and obesity. While our findings need to be reproduced in humans, they suggest that NNS consumption during pregnancy and lactation may have adverse effects on infant metabolism."

- March 31, 2020, Gut Microbes, issue 4, Chinese study, 'Maternal sucralose intake alters gut microbiota of offspring and exacerbates hepatic steatosis in adulthood': *"Nonalcoholic fatty liver disease (NAFLD) is considered to be associated with diet and gut dysbiosis. Excessive sucralose can induce gut dysbiosis and negatively affect host health. Maternal diet shapes the microbial communities of neonate and this effect continues in later life. We aimed to investigate the effects of maternal sucralose (MS) intake on the susceptibility of offspring to hepatic steatosis in adulthood. ... MS intake inhibits intestinal development, induces gut dysbiosis in offspring through down-regulation of GPR43, and exacerbates HFD-induced hepatic steatosis in adulthood."*

- In May 2023 a study was published that explained that all past research up to 2000 that led to the legalization of sucralose has been extremely flawed (or crooked), and that since studies have completely reversed all safety assumptions (and even showed evidence that sucralose impacts the health of offspring). It also did its own experiments, showing that sucralose is geno- and gut-toxic. This mostly is due to the impurity and metabolite sucralose-6-acetate, but also due to sucralose itself:
  - May 29, 2023, Journal of Toxicology and Environmental Health, 'Toxicological and pharmacokinetic properties of sucralose-6-acetate and its parent sucralose: in vitro screening assays' (PDF): *"Sucralose-6-acetate is an intermediate and impurity in the manufacture of sucralose, and recent commercial sucralose samples were found to contain up to 0.67% sucralose-6-acetate. Studies in a rodent model found that sucralose-6-acetate is also present in fecal samples with levels up to 10% relative to sucralose which suggest that sucralose is also acetylated in the intestines. ... The amount of sucralose-6-acetate in a single daily sucralose-sweetened drink might far exceed the threshold of toxicological concern for genotoxicity (TTCgenotox) of 0.15 µg/person/day.*

    The RepliGut System was employed to expose human intestinal epithelium to sucralose-6-acetate and sucralose, and an RNA-seq analysis was performed to determine gene expression induced by these exposures. Sucralose-6-acetate significantly increased the expression of genes associated with inflammation, oxidative stress, and cancer with greatest expression for the metallothionein 1G gene (MT1G).

Measurements of transepithelial electrical resistance (TEER) and permeability in human transverse colon epithelium indicated that sucralose-6-acetate and sucralose both impaired intestinal barrier integrity. ...

These historical studies [until 2000] made the following 6 claims regarding sucralose and constituted the rationale for its regulatory approval:

1) Stability in vivo: Passes through the intestine unchanged.

2) Gut Microflora: No effect on gut microflora.

3) Intestinal Barrier: No effect on intestinal tissue.

4) Bioaccumulation: Does not bioaccumulate.

5) Metabolism: No effect on metabolism including blood glucose or insulin.

6) Biological/Toxicological Impact: Not genotoxic with no associated biologically significant consequences, and is heat stable. ...

Many scientific research investigations since regulatory approval, however, do not corroborate any of the 6 early historical claims regarding the biological fate or safety of sucralose.

Stability in vivo: *Two acetylated sucralose biotransformation products were found in urine and feces of rats dosed with sucralose (Bornemann et al. Citation2018), and this finding is inconsistent with the historical claim that sucralose is stable and excreted unchanged (i.e., not metabolized) in the intestine. The more abundant acetylated metabolite was identified as sucralose-6-acetate (Werness and Schiffman Citation2020)...*

Gut microflora: *Ingestion of sucralose by humans and/or animals within approved ADI levels was found to disrupt the microbiome in the gastrointestinal tract (GIT) (Abou-Donia et al. Citation2008; Bian et al. Citation2017; Méndez-García et al. Citation2022; Suez et al. Citation2022; Zhang et al. Citation2022). Maternal ingestion of sucralose in pregnant and lactating mice also impacted their progeny's microbiome (Dai et al. Citation2020, Citation2021; Olivier-Van Stichelen, Rother, and Hanover Citation2019). Sucralose has also been detected in human breast milk samples from lactating women which indicates it is ingested by nursing infants (Sylvetsky et al. Citation2015)...* ***Intestinal barrier:*** *Sucralose also impacts the intestinal tissue. Sucralose ingestion induced histopathological changes including lymphocytic infiltrates into the intestinal epithelium, glandular disorganization, and epithelial scarring (Abou-Donia et al. Citation2008), increased bacterial infiltration into the ileal lamina propria in Crohn's disease – like ileitis (Rodriguez-Palacios et al. Citation2018), elevated %*

CD3+T cells, CD19+B cells, and IgA+ plasma cells in Peyer's patches (Rosales-Gómez et al. Citation2018), significantly increased levels of fecal chymotrypsin and trypsin and reduced fecal β-glucuronidase (Li et al. Citation2016), initiated lymphocyte aggregation in the ileum and colon (Zheng et al. Citation2022), and promoted inflammation and colitis-associated colorectal cancer risk (Guo et al. Citation2021; Li et al. Citation2020; Wang et al. Citation2019). Further, maternal ingestion of sucralose inhibited intestinal development, disrupted barrier function, and induced Paneth cell defects in offspring (Dai et al. Citation2020, Citation2021). In vitro studies demonstrated that sucralose enhanced biofilm formation along with bacterial invasion into gut epithelial cells (Shil and Chichger Citation2021) and disrupted tight junctions and barrier function in an intestinal epithelial model (Shil et al. Citation2020). ...

Bioaccumulation: *Sucralose was found to bioaccumulate in adipose tissue of rats and was present two weeks after cessation of a 40-day feeding period even though it had disappeared from the urine and feces (Bornemann et al. Citation2018). An in vitro study reported that sucralose increased lipid accumulation and expression of adipocyte differentiation genes in cultured adipocytes (Azad et al. Citation2020). ...*

Metabolism: *Consumption of sucralose was noted to alter glucose and/or insulin concentrations in the plasma of some human subjects when delivered in liquids or capsules (Lertrit et al. Citation2018; Méndez-García et al. Citation2022; Pepino et al. Citation2013; Romo-Romo et al. Citation2018; Schiffman and Rother Citation2013; Suez et al. Citation2022) and when accompanied by carbohydrate (Dalenberg et al. Citation2020) or another non-caloric sweetener (Young et al. Citation2017).... Maternal ingestion of sucralose during pregnancy impacted the progeny's metabolism including downregulation of hepatic detoxification mechanisms and changes in bacterial metabolites (Olivier-Van Stichelen, Rother, and Hanover Citation2019). [There's more]*

Biological/Toxicological impact: *Additional independent research investigations since regulatory approval reported toxicological findings including genotoxicity and cancer risk following sucralose exposure. Sucralose, administered in feed beginning prenatally through the lifespan, induced hematopoietic neoplasias such as leukemias in male mice (Soffritti et al. Citation2016). Significant elevation in the number and size of colorectal tumors was detected in a murine model of colorectal cancer after sucralose treatment (Li et al.*

Citation2020). Four different studies utilizing a comet assay found that sucralose damaged DNA (Pasqualli et al. Citation2020; Raya et al. Citation2020; Sasaki et al. Citation2002; Van Eyk Citation2015). Sucralose also enhanced antimicrobial resistance and mutation frequency of E.coli (Qu et al. Citation2017). Further, heating sucralose with glycerol or lipids was found to generate chloropropanols, a potentially toxic class of compounds (Rahn and Yaylayan Citation2010), and this finding was supported by subsequent investigations that also reported thermal instability of sucralose accompanied by generation of hazardous polychlorinated compounds even in mild temperature conditions (De Oliveira, de Menezes, and Catharino Citation2015; Eisenreich, Gürtler, and Schäfer Citation2020). ..."

- May 31, 2023, North Carolina State University press release (news.ncsu.edu), 'Chemical Found in Common Sweetener Damages DNA' (same as above study): "*Susan Schiffman, corresponding author of the study and an adjunct professor in the joint department of biomedical engineering at North Carolina State University and the University of North Carolina at Chapel Hill [explains:] "Other studies have found that sucralose can adversely affect gut health, so we wanted to see what might be happening there. When we exposed sucralose and [its metabolite] sucralose-6-acetate to gut epithelial tissues ... we found that both chemicals cause 'leaky gut.' ... We found that sucralose-6-acetate is genotoxic, and that it effectively broke up DNA... We [also] found that gut cells exposed to sucralose-6-acetate had increased activity in genes related to oxidative stress, inflammation and carcinogenicity. ... It's something you should not be eating. ...*

  To put this in context, the European Food Safety Authority has a threshold of toxicological concern for all genotoxic substances of 0.15 micrograms per person per day," Schiffman says. "Our work suggests that the trace amounts of sucralose-6-acetate in a single, daily sucralose-sweetened drink exceed that threshold. And that's not even accounting for the amount of sucralose-6-acetate produced as metabolites after people consume sucralose.""

- Aspartame causing a worsening of migraine symptoms in some people actually already was documented in studies from the 1980s:
  - Feb. 1988, Headache journal (headachejournal.onlinelibrary.wiley.com), 'The Effect of Aspartame on Migraine Headache': *"Recently, three pilot studies have proposed that the addition of products containing aspartame to the diets of migraine headache sufferers may*

produce a significant increase in the frequency of their migraines. The present study was a controlled thirteen-week, double-blind, randomized cross-over study comparing the effect of aspartame to that of a matched placebo on the frequency and intensity of migraine headache. The results of this study indicated that the ingestion of aspartame by migraineurs caused a significant increase in headache frequency for some subjects."

Notes

1. Feb. 1988, Headache journal (headachejournal.onlinelibrary.wiley.com), 'The Effect of Aspartame on Migraine Headache'.
2. Oct. 1979, Annals of the New York Academy of Sciences, 'The Conflict Between Individual Freedom And Social Control: Saccharin And Food Additives'.
3. July-Aug. 2003, official FDA historian Suzanne White Junod for Update Magazine, 'Sugar: A Cautionary Tale'.
4. Sep. 17, 2008, American Contact Dermatitis Society, 'Formaldehyde, Aspartame, and Migraines: A Possible Connection'. Also see the next source.
5. 2010, issue 1, Journal of Food Law & Policy, Jason Iuliano (Cambridge University), 'Killing Us Sweetly: How To Take Industry Out Of The FDA' (PDF).
6. June 1987, U.S. GAO, 'FDA: Food Additive Approval Process Followed for Aspartame: Report to the Honorable Howard M. Metzenbaum, U.S. Senate', p. 66.
7. Ibid., p. 68.
8. Ibid., p. 2.
9. April 8, 1976, U.S. Congress: House, 'Preclinical and Clinical Testing by the Pharmaceutical Industry, 1976: Joint', Statement by Alexander M. Schmidt, M.D., FDA commissioner 1973-1976.
10. Ibid.
11. April 9, 1976, The Argus (Fremont, California).
12. June 1987, U.S. GAO, 'FDA: Food Additive Approval Process Followed for Aspartame: Report to the Honorable Howard M. Metzenbaum, U.S. Senate'.
13. June 1987, U.S. GAO, 'FDA: Food Additive Approval Process Followed for Aspartame: Report to the Honorable Howard M. Metzenbaum, U.S. Senate', p. 39.
14. Nov. 29, 1987, New York Times, 'Pervasive Chemical, Crucial to the Body, Is Indicted as an Agent in Brain Damage'.
15. *) June 1987, U.S. GAO, 'FDA: Food Additive Approval Process Followed for Aspartame: Report to the Honorable Howard M. Metzenbaum, U.S. Senate'.

*) Nov. 18, 1996, CNN, 'Study suggests link between aspartame and brain cancer'.

16. Sep. 2006, Cancer Epidemiology, Biomarkers & Prevention journal, 'Consumption of Aspartame-Containing Beverages and Incidence of Hematopoietic and Brain Malignancies', p. 39.
17. June 1987, U.S. GAO, 'FDA: Food Additive Approval Process Followed for Aspartame: Report to the Honorable Howard M. Metzenbaum, U.S. Senate', p. 5.
18. hbs.edu/leadership/20th-century-leaders/details?profile=donald_h_rumsfeld (accessed: June 7, 2024): *"After Daniel Searle had all but run his family's company into the ground, Rumsfeld took over and began cutting costs across the board. After selling off the majority of Searle's non-pharmaceutical business with the exception of the Pearle Vision chain, Rumsfeld's trimming helped Searle turn a profit of over $120 million in 1982. The real success of Searle under Rumsfeld, however, came with the FDA approval of Aspartame, the artificial sweetener that became popular and very profitable for Searle during the 1980s diet craze."*
19. fda.gov/about-fda/fda-leadership-1907-today/arthur-hayes (accessed: June 7, 2024): *"4/13/1981 - 9/11/1983."*
20. May 7, 1985, Congressional Record: Senate, p. 10804: *"Nonetheless, in 1981, ArthurHull Hayes, then Commissioner of Food and Drugs, approved aspartame for use in dry foods and as a table-top sweetener. ... Soon after Dr. Hayes left the agency and took a job as senior medical consultantfor Burson-Marsteller, a public relations agency that represents Searle."*
21. May 29, 2023, Journal of Toxicology and Environmental Health, 'Toxicological and pharmacokinetic properties of sucralose-6-acetate and its parent sucralose: in vitro screening assays' (PDF): *"Sucralose-6-acetate is an intermediate and impurity in the manufacture of sucralose, and recent commercial sucralose samples were found to contain up to 0.67% sucralose-6-acetate. Studies in a rodent model found that sucralose-6-acetate is also present in fecal samples with levels up to 10% relative to sucralose which suggest that sucralose is also acetylated in the intestines. ... Many scientific research investigations since regulatory approval, however, do not corroborate any of the 6 early historical claims regarding the biological fate or safety of sucralose."*
22. *) June 20, 2019, Frontiers in Microbiology, 'Maternal Exposure to Non-nutritive Sweeteners Impacts Progeny's Metabolism and Microbiome'.

    *) March 31, 2020, Gut Microbes, issue 4, Chinese study, 'Maternal sucralose intake alters gut microbiota of offspring and exacerbates hepatic steatosis in adulthood'.

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